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NATIVE SHRUB CUTTINGS TESTED

Over 50,000 containerized native shrubs being produced at the Forest Service Nursery, Coeur d'Alene, Idaho, will be shipped to various demonstration plots in the spring of 1976 to test adaptability and survival. However, this is only a small portion of the native plant material needed to reclaim the thousands of acres disturbed by past and ongoing mining operations as well as road cuts and eroded streambanks.

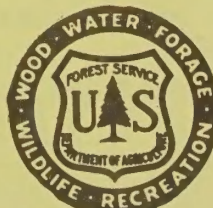
Recognizing the critical need for native plant material, SEAM began funding the containerized shrub testing program at the Coeur d'Alene Nursery in 1974. Through this cooperative project, SEAM hoped to get plants in the ground as soon as possible and also develop techniques for others to use in growing native shrubs.

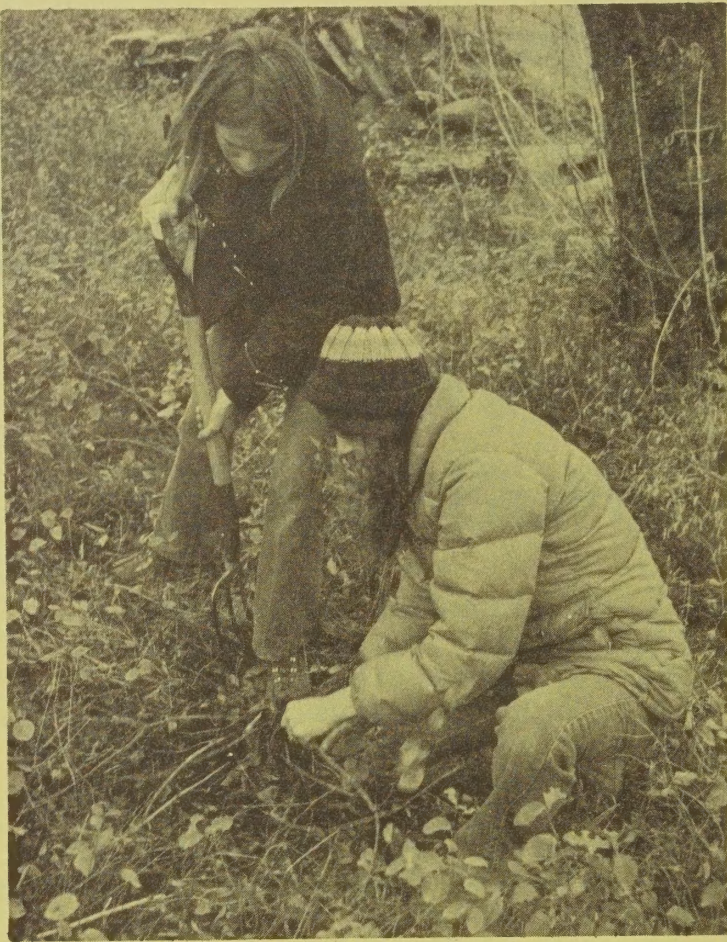
Initial work at the Coeur d'Alene Nursery has concentrated on producing containerized shrubs from seed sources. Working with seed, however, often involves up to eight months stratification time, after which some species may germinate while others won't. The failure of some species to germinate not only results in a loss of time but also a loss of valuable greenhouse space.

To find a way around this problem, SEAM established a cooperative project with the Agriculture Technology Department of Spokane Community College (SCC), Spokane, Washington, to investigate the use of tip, stem, and root cuttings from an established stock of native shrub species.

145 Grand Ave., Billings, MT 59102

January 1976





SCC students, Carole Montgomery and Gale Thompson, dig for root cuttings on the SCC campus. The students working on the project took cuttings from 20 shrub species in the Spokane area.

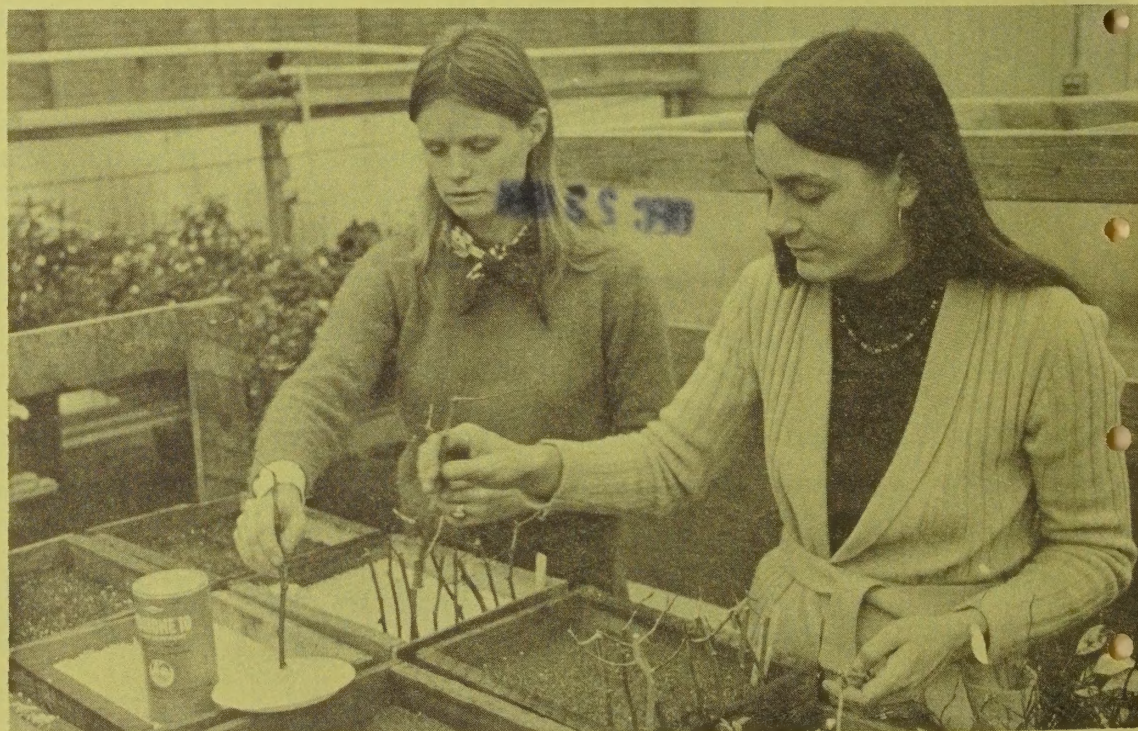
The work at SCC began in the spring of 1975 and was aimed at developing cutting techniques from 20 of the most requested shrub species. With advice from Charles Parsons, Horticulture Instructor, and Robert Grotenfend, Natural Resource Instructor, at SCC, four students in the Horticulture Department, Gordon Byrd, Carole Montgomery, Gale Thompson, and Fred White, have been carrying out tests on the identified shrubs.

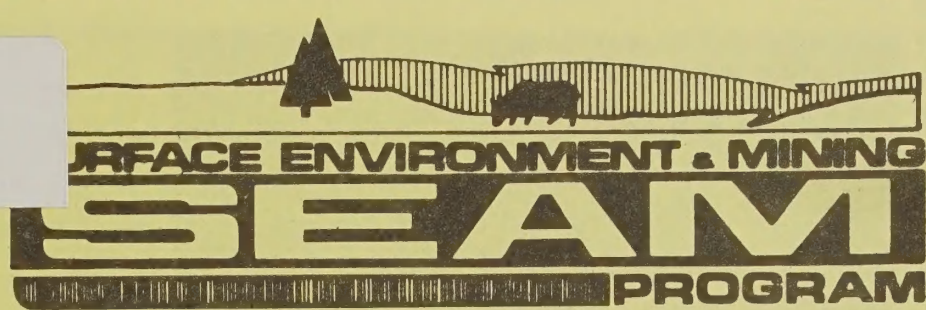
The students first located all 20 shrub species in the Spokane area and made stem and tip cuttings from each at five different times of the year. When possible, root cuttings were also obtained. The first cuttings were taken in the spring when the buds were still dormant,

and successive cuttings were taken in late spring after dormancy had broken, during summer for soft wood, in early fall for semi-hard wood, and in late fall for hard wood.

In the SCC greenhouse, the cuttings are treated with a hormone to stimulate root growth and tip and stem cuttings from each shrub species are planted in three different growing mediums - sand, perlite, and a mixture of mica, peat, and sand. After four to five weeks growing time, the students begin checking for root development. Those cuttings that have sprouted roots are transplanted into Tinus root trainers for further development. After several months in the Tinus containers, the shrubs are transplanted on an outdoor plot.

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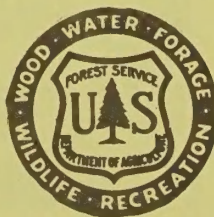
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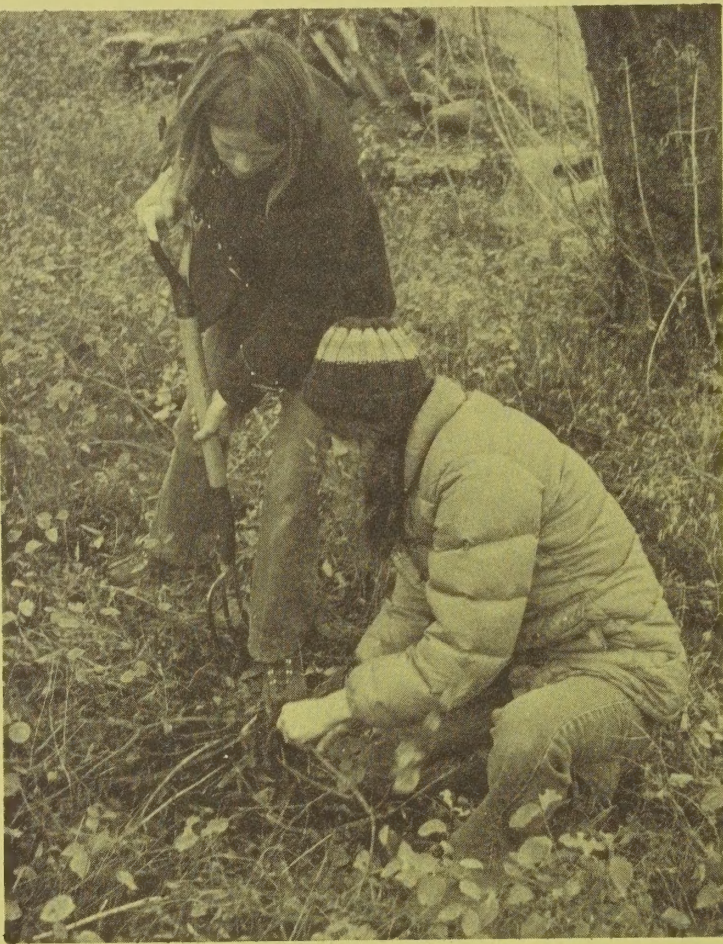
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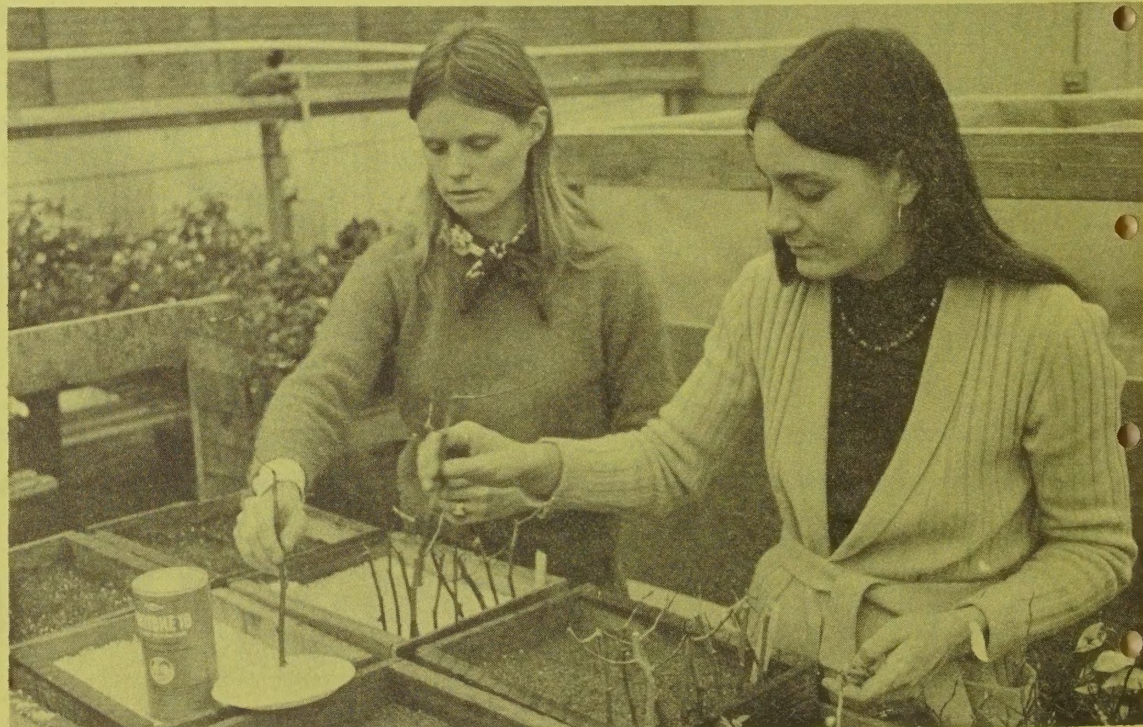
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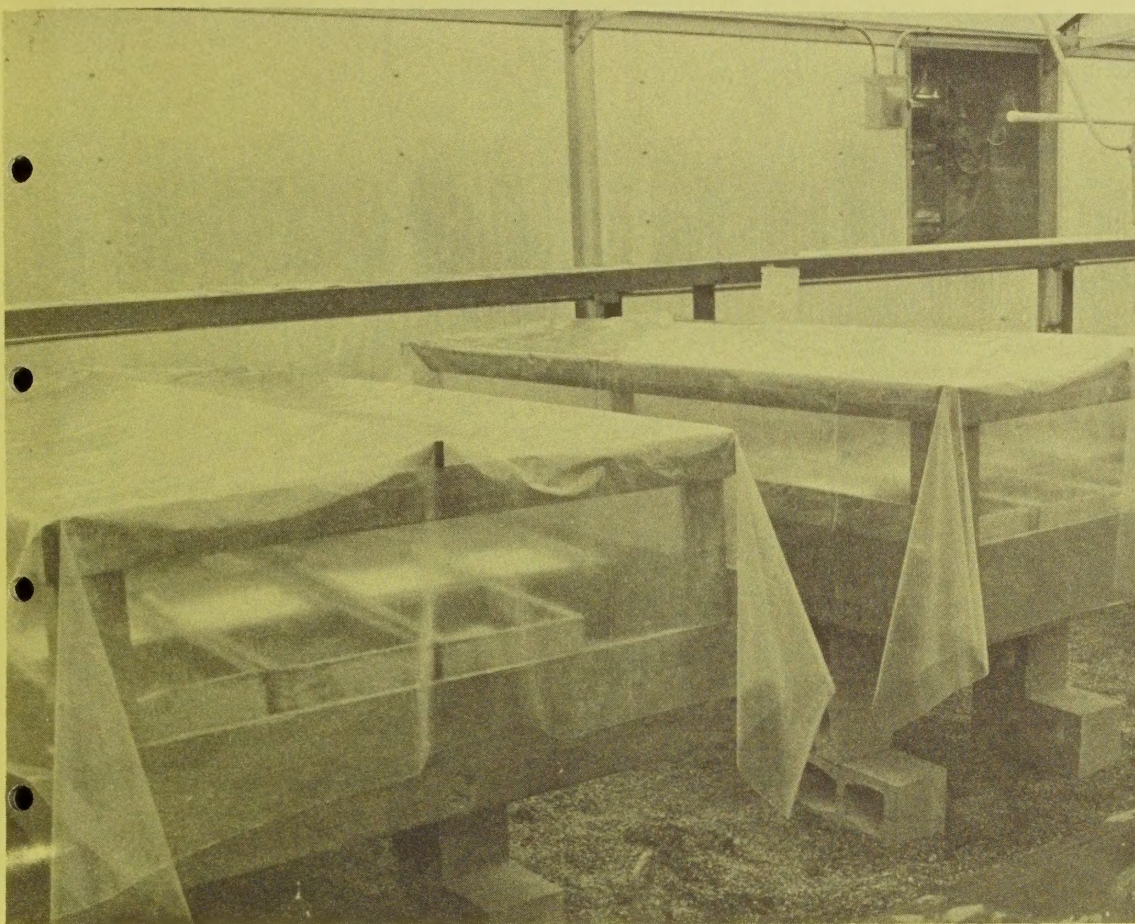
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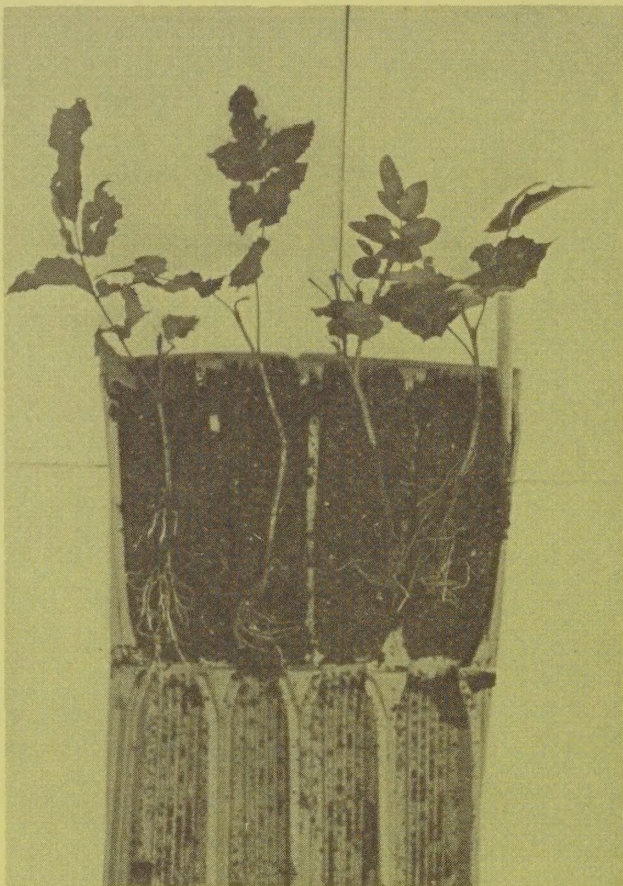
Cuttings are grown in covered boxes inside the SCC greenhouse. Those cuttings with leafs are kept moist with mist sprayers.

By keeping careful charts and records, the students are able to determine which combinations involving the time of cutting, the type of cutting (stem, tip, or root), and the type of growing medium produce the best growth for each shrub species.

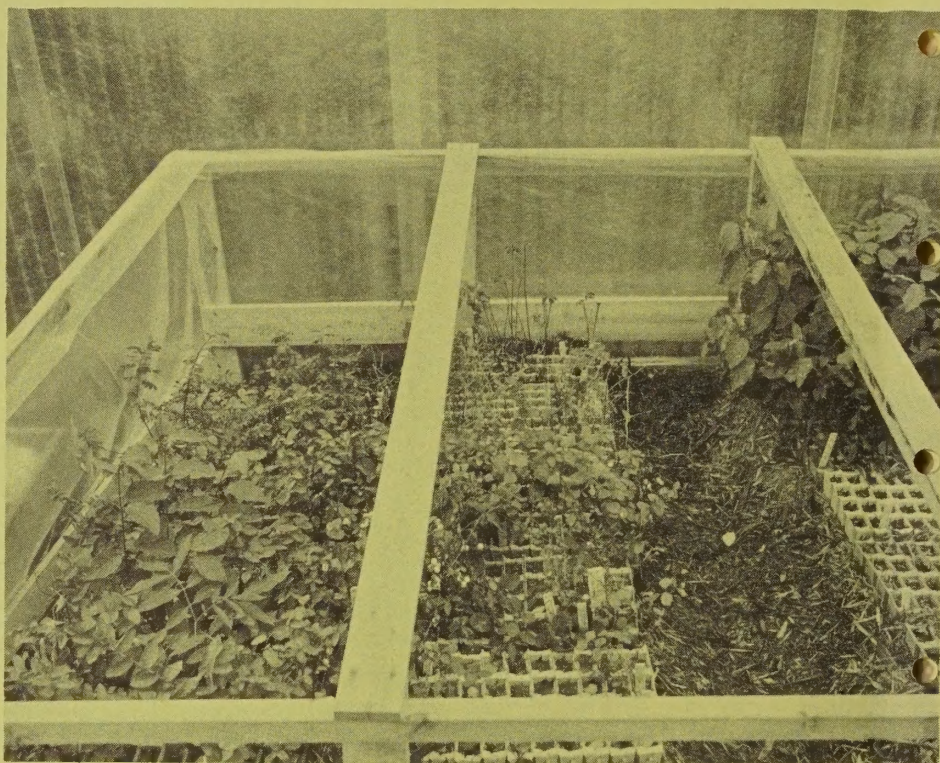
Because of good initial results, the cuttings program at SCC has been extended and will be coordinated with the seed production tests being run at the Coeur d'Alene Nursery. Those species particularly troublesome for seed stratification will be tested for growth by cuttings and vice versa. All of the findings will be compiled in "cookbook" fashion to present the most efficient way to grow each individual shrub species, whether by seed or by cutting.

Gordon Byrd inspects cuttings for root development. Records are kept on all phases of the cuttings project.





Cuttings that sprout roots are transferred to Tinus root trainers for further development...

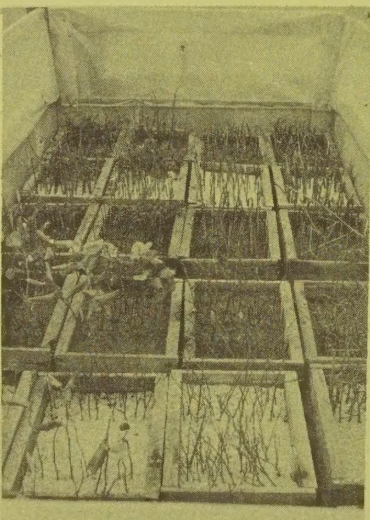


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In the future it may well be possible to establish outdoor plots of those species receptive to propagation by cutting, and then, by following specific directions developed through the SCC project, to transfer the cuttings to containers in the greenhouse. By combining seed stratification and cutting techniques, a wider variety of native shrubs can be made available.

As techniques are developed and perfected, SEAM will apply them to suitable reclamation sites and will also make information available to others who have a need for native shrubs.

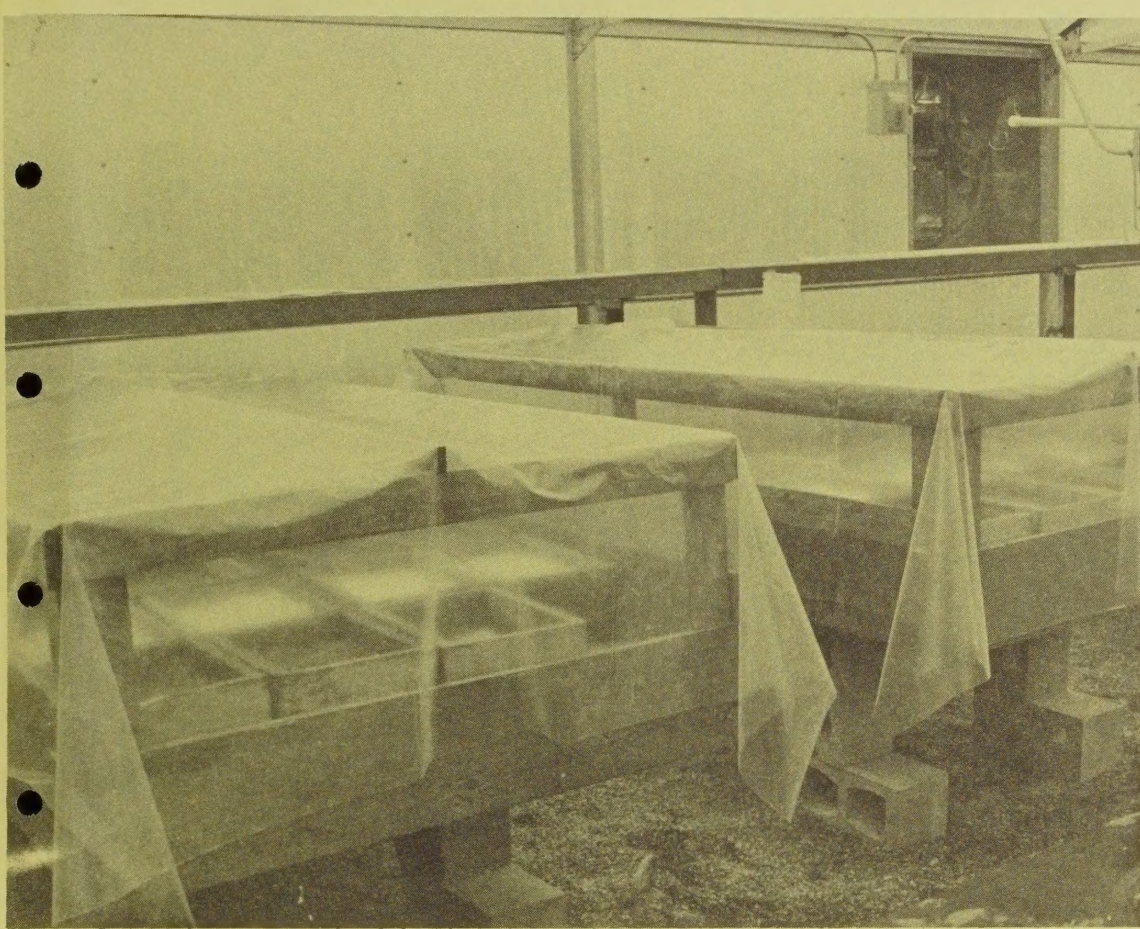
cuttings



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seed



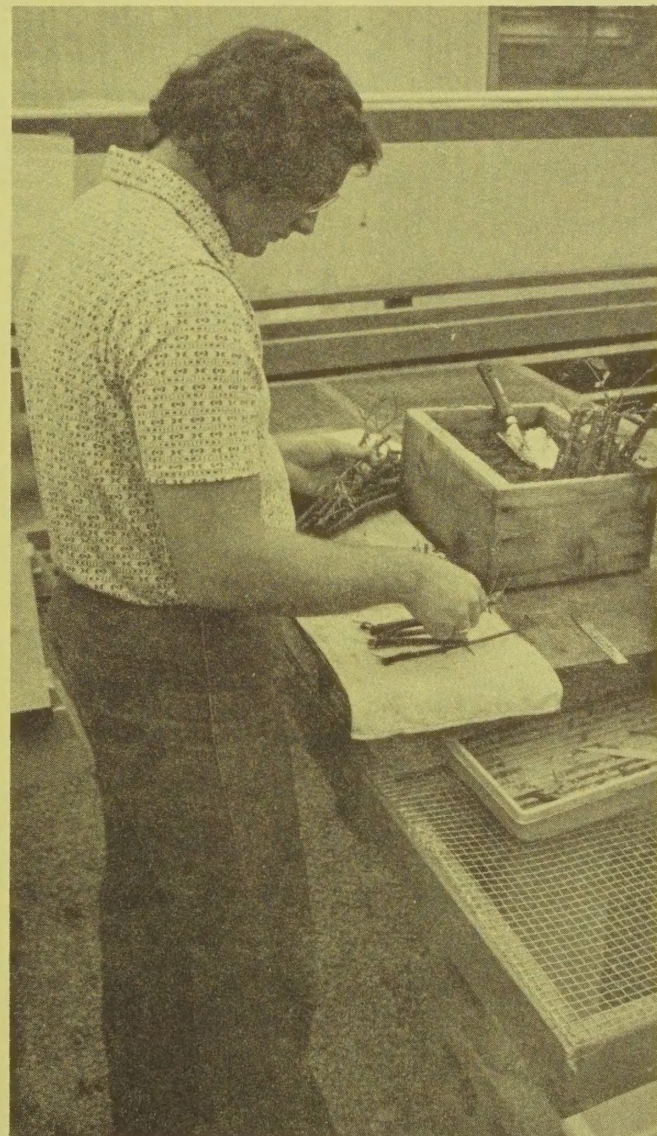


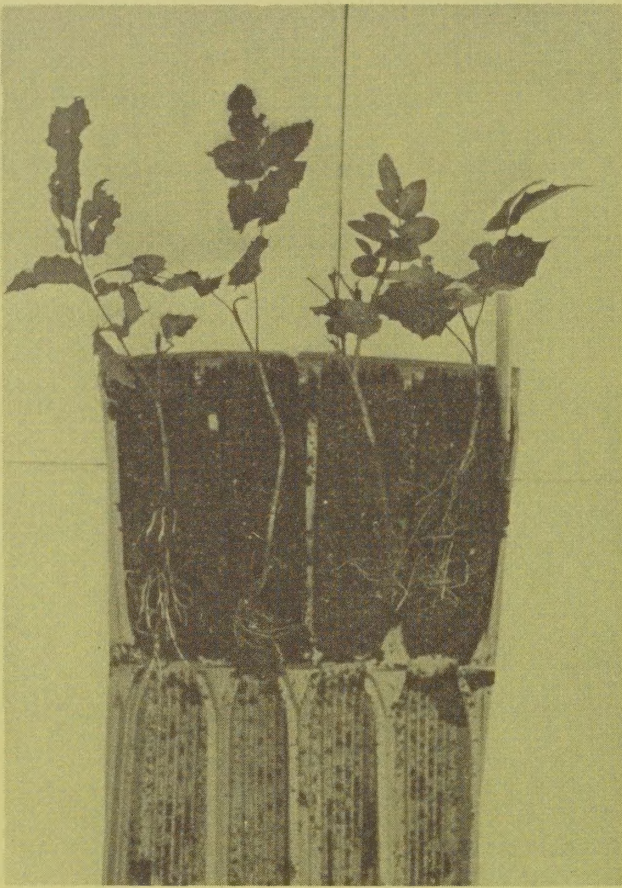
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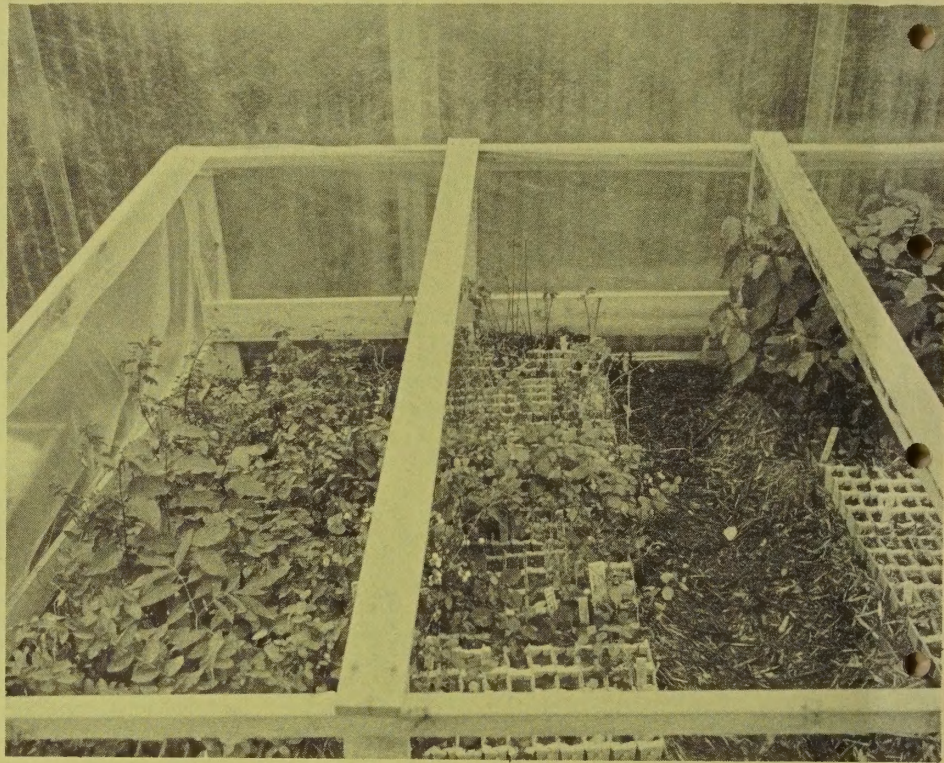
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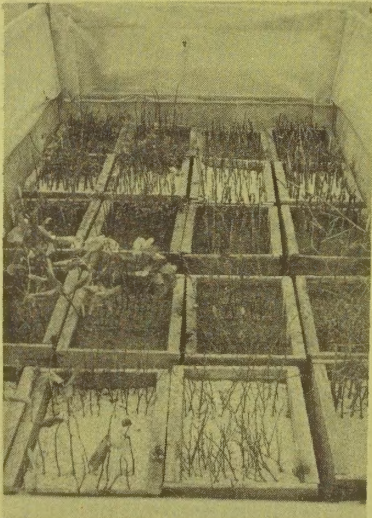


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